

CUT WASTE, CUT COSTS

USING THE WASTE MANAGEMENT HIERARCHY



The Waste Management Hierarchy

Waste is material that was purchased to go into a product but is thrown away or lost. Waste is more than material; it is money.

One way to stop waste is to follow the Waste Management Hierarchy. This chart is a guide to environmental behavior, starting with the best behaviors.

Businesses that use the first three behaviors (reduce, reuse, and recycle) can eliminate much waste. They can also reduce costs: purchasing and using special equipment, special training for employees, potential insurance losses, worker compensation claims, permits, and fees.

POLLUTION PREVENTION

These steps of the hierarchy are also the cornerstone of Pollution Prevention (P2). P2 stops waste and pollution, at the source, *before* they happen.

The bottom line is to have less loss and less risk of polluting the environment by having less waste. Following **The Waste Management Hierarchy** will help businesses achieve that goal.

Start with the best behavior: reduce.

REDUCE

The first step in The Waste Management Hierarchy is to *reduce* the potential for pollution. There are two ways to accomplish this goal: buy smaller amounts or buy less hazardous materials.

Reduce the Amount

Do not store large quantities of materials on site. Holding smaller amounts of hazardous chemicals on site reduces the risk of leaks or accidental spills. If there is an accident, it might be less of an emergency. A “just in time” inventory reduces waste. Order items as needed or just before they are needed. “Just in time” inventory also helps eliminate the problem of having out of spec materials.



Reduce how much material you use in processes. Some people believe that if 5 gallons will do the job then 10 gallons will do a better job or do it twice as fast. They simply waste 5 gallons because what is not necessary to do the job is waste.

Businesses often find that they can use smaller amounts of chemicals in a process and still obtain good results. Perhaps they can do a job with only 3 gallons, saving 2 gallons for the next batch. This practice makes the original purchase go nearly twice as far.

Reduce the Hazard

Many manufacturers are making increasingly safer products. For example, it is now possible to find citrus



MEET JAMES NEWMAN:

P2 TECHNICAL ASSISTANCE COORDINATOR

ENVIRONMENTAL HEALTH SPECIALIST, SPECIAL WASTE PROGRAM

A native of Nebraska, Jim has lived in Lincoln for the majority of his life. He graduated from Northeast High School and attended the University of Nebraska Lincoln where he recently received a B.S. in Natural Resources. Jim approaches his new job in the spirit of the Lincoln–Lancaster County Health Department’s core values of Integrity, Inclusion, and Innovation.

Jim has a strong affinity for the business community due to his diverse work experience. Jim worked in the food processing industry as a laboratory technician for a soybean processor, as a quality control inspector for a meat processor, and on the production floor and in the laboratory in a dairy operation. Jim began his career as a public servant after several years in quality control for an offset printing company and in the die cutting and the folding and gluing operations at a local box board factory.

His first position with local government was with the City of Lincoln’s solid waste operations as an Environmental Compliance Technician. Jim then moved back into the laboratory at the city’s Water Production Plant in Ashland, NE. Jim made a move from city government to the local Natural Resources District working as a Water Resources Technician while completing his undergraduate studies.

His experiences working with multiple levels of local and state government give Jim a diverse background from which to draw when working with local businesses. His understanding of the implementation of best management practices and solid waste regulations complement his current position. Jim’s philosophy as a technical assistance provider for Pollution Prevention will be to encourage the use of best management practices in reducing the use of hazardous materials in the work place.

Jim will provide technical assistance to small businesses on a voluntary basis. Businesses that request assistance can expect Jim to analyze their current operations and make pollution prevention recommendations. Jim will recommend implementation of the best available technology and best management practices suited to each business. As a technical assistance provider to small businesses, Jim wants to help businesses achieve their goals of reduced regulatory burden and increased efficiency and competitiveness.

In addition to his advisory work, Jim will serve as a member of the Hazardous Materials Response Team.



SAVE GAS, SAVE THE AIR

Most of the air pollutants in Lincoln and Lancaster County come from gas powered on and off road vehicles and equipment. Home owners and small business operators can often cut gasoline expenses and protect air quality by converting to electrical equipment, especially lawn equipment.

Drivers can achieve some of the same goals by reducing or eliminating idling time. Employees can carpool or take public transportation to work. Drive less, use less gas and you will cut costs and keep the air clean.



CUT WASTE (CONTINUED FROM PAGE 1)



or water-based solvents that will do the job of more hazardous halogenated solvents. By purchasing less hazardous chemicals, businesses find that the quality of their products remains high, or improves. At the same

time, businesses reduce risk of liability and health problems. They often save money as well. Some of the safer chemicals are not regulated or are not regulated as strictly as the more hazardous chemicals.

Solvent substitution information is available from:

- ★ Enviro\$en\$e <<http://es.epa.gov/>>,
- ★ The Solvent Alternative Guide (SAGE) <<http://clean.rti.org>>, and
- ★ The Western Regional Pollution Prevention Network (WRPPN) <<http://www.wrppn.org/irta/>>.

REUSE

Reuse what you can not reduce. For example, many industries use distillation and filtration systems to capture and refine solvents for reuse. This process can extend the life of a solvent giving businesses more payback on their purchases.

Some printers will mix left over ink for non-spec or in-house jobs. Some businesses will reuse pallets, drums, and other shipping materials. (Drums and barrels that contained hazardous materials need to be properly cleaned or should be reused for the same materials. Check with the product's manufacturer or your supplier before reusing these drums.)

RECYCLE

Materials that cannot be reused should be *recycled*. Recycling saves resources



and reduces the energy needed to make new materials. (Producing energy can also produce pollution.)

Some materials (for example oil, many solvents, and mercury) **must** be recycled. The Lincoln-Lancaster County Health Department (LLCHD) can provide a list of items that must be recycled and the names of recycling companies; call 441-8040.

TREAT

Treating a waste removes or reduces the hazardous and toxic content. Many hazardous wastes must be treated before they are discarded. Treatment is the first step in disposal of some wastes; therefore, it is not really a P2 action.

DISPOSE

Businesses should dispose of wastes only as a last resort. If businesses take the other steps of the hierarchy, they will find that they have less material to discard than they had previously. Disposal costs money (fees, contracts, storage, etc.), and the waste can harm human health and the environment.

Businesses must contract with a hazardous waste disposal company in order to dispose of certain wastes. The LLCHD Special Waste Program (441-8640) can provide information and the names of companies that provide this service.

ZERO WASTE

The ideal would be to have no waste at all. Some businesses and communities have come close to that ideal. Even if we cannot achieve a “zero waste” goal, we can reduce the costs and the damage done to human health and the environment by following The Waste Management Hierarchy.



ALTERNATIVES

JAMES NEWMAN, TECHNICAL ASSISTANCE COORDINATOR

Pollution prevention (P2) often relies on substituting less hazardous products for those that pose great risk to human health and the environment. The Technical Assistance Program can help businesses identify those safer alternatives.

Many manufacturers currently use products that are hazardous due to their characteristics. Characteristics of hazardous materials include reactivity (it reacts to another material, often by exploding), flammability, corrosiveness, and toxicity.



There are several good less hazardous alternatives to some flammable solvents. Acetone, Toluene, Xylene, and Methyl Ethyl Ketone (ME) are all examples of flammable liquids with nonhazardous drop-in substitutions.

Many of these replacement products exist in formulations with lower vapor pressures and higher solvency which allow reuse by in house by filtration.

Purchasing and reusing a nonhazardous solvent might not only save money but help improve the environment. Interested in learning more? Contact the Lincoln Lancaster County Health Department (441-8021) to schedule a confidential consultation.



YOUR TURN

The ETHIC is your newsletter. In order to serve you better, we need your input. Suggest topics you'd like to read about. Share success stories (your own or others) that demonstrate the effects of P2 in action. Submit ideas, articles, or questions to:

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WHAT'S IN A NAME?

The name of this newsletter, *The ETHIC*, reflects a philosophy expressed by President Clinton when he signed into law the Clean Air Act Amendments of 1990. President Clinton announced, "Pollution prevention is the environmental ethic of the United States." This ethic is a code of behavior for businesses and households, committing all residents of the United States to behaviors that make and keep our environment clean. We accomplish that goal by reducing waste and stopping (not just cleaning up) pollution at the source. The ethic we all live by should be to keep pollution from occurring.

The ETHIC began publication a little over 11 years ago. Its goal has been to promote the ethic of pollution prevention. The newsletter offers advice and suggestions to guide residents of Lincoln and Lancaster County in living that philosophy.

What's in a name?

A lot.



**POLLUTION
PREVENTION**

**THE ENVIRONMENTAL ETHIC OF
LANCASTER COUNTY**

The Ethic is published by the Lincoln-Lancaster County Health Department and is distributed to Special Waste Permit holders and other businesses in Lincoln and Lancaster County.

For more information or for P2 technical assistance, call 441-8040.

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